














## Tap M10 Z3

A10-020

The geminiTAP machine is equipped with 2 grinding spindles, 2 dressing units an oscillating table (W-axis) and a 6-axis robot. In the production cycle the dressing cycles are included. It is not needed to dress the flute wheel during every cycle, therefore we can reduce the cycle time by around 10 seconds.



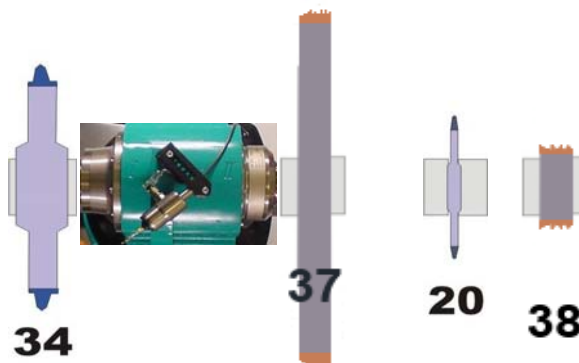
### 1. Cycletime for Production

| Tool specifications<br>M10, Length 20 mm, flutelength 34 mm, Helix 0°<br>Material HSS |  |   |   |   |   |  |   |
|---|--|---|---|---|---|--|---|
| Operations  |  |   |   |   |   |   |   |
|   | Load   | Flute   | Thread rough  | Thread fine   | Chamfer   | dress flute  | dress thread  |
| Feed [mm/Min]   |  | 2000  | 12000   | 12000   | 12000   | 100  | 100   |
| Power [kW]  |  | 6   | 4   | 4   | 4   | 1  | 1   |
| Cutting feed [m/s]  |  | 70  | 65  | 65  | 65  | 24   | 24  |
| Used wheels   |  |  |  |  |  |  |  |
|   |  | 34  | 37  | 37  | 37  | 20   | 38  |
| Grinding time [s]   | 14   | 23  | 25  | 18  | 21  | 16   | 32  |
| Total cycle time  | 2 Min 29   |   |   |   |   |  |   |

The mentioned cycle times are indicative. The material to be ground, different grinding wheels or other coolants can influence the cycle times considerably.

### 2. Used Grinding Wheels

34 Ø180 DXF A80  
37 Ø400 1A1 A250  
20 Ø125 14EE1 D301  
38 Ø90 DXF D301



### 3. Machine and Software Requirements

Machines: 6 axes CNC grinders : geminiTAP, dressing unit  
Control: Fanuc 31i  
Coolant: Synthetic Oil, pressure 14-16 bar  
Software: Quinto 5

responsible engineer: FFR,16.01.14

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